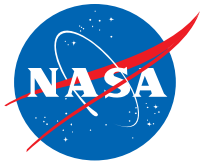
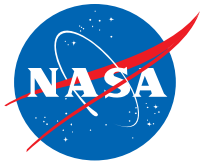


EMPLOYING WEB 2.0 IDEAS IN GOVERNMENT

Presented by Dawn McIntosh
NASA Headquarters

Team Members:
Lead: Elizabeth Foughty, MCT, Inc.,
Francesca Barrientos Ph.D., formerly of RIACS,
Bryan Matthews, SGT, Inc.,
Ashok Srivastava Ph.D., NASA Ames Research Center

Outline

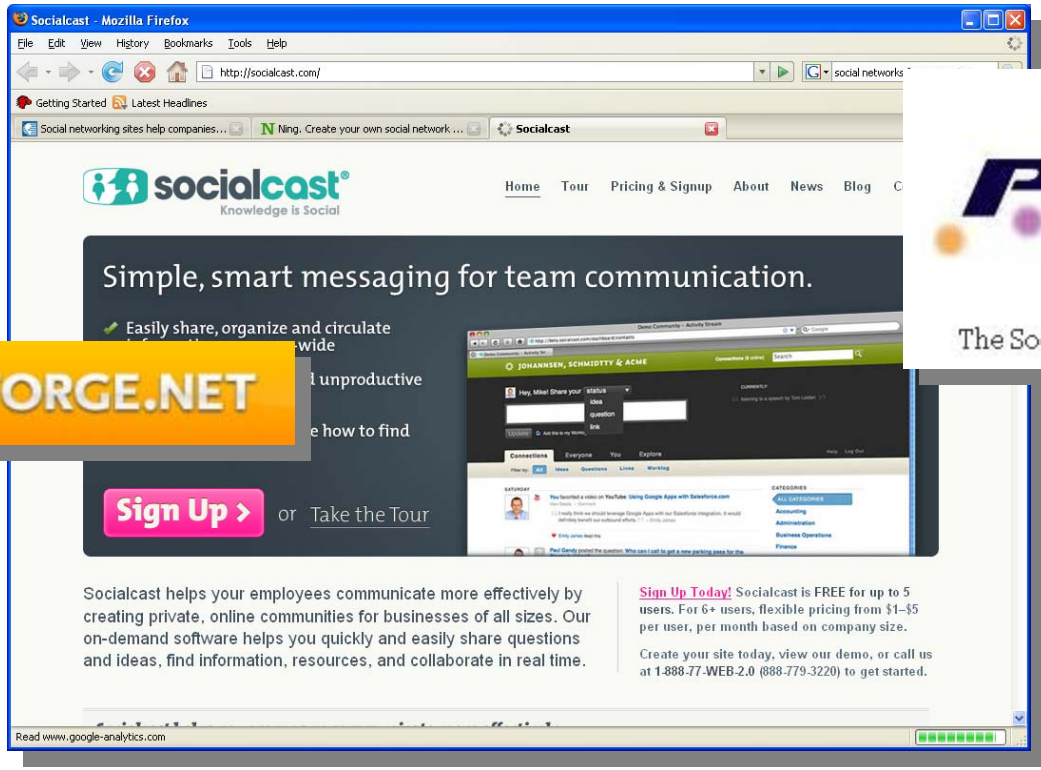


- Why Web 2.0? Collaboration of course
  - Web Tools applied to NASA
- DASH*link* & Trac
- Challenges of Web 2.0 approaches @ NASA
  - Example – highlighting unique attributes and solution-based approach
- Lessons Learned
- Concluding Remarks

Social Networks & the Workplace

"Research in a number of academic fields has shown that social networks operate on many levels … and play a critical role in determining the way problems are solved, organizations are run, and the degree to which individuals succeed in achieving their goals."

- Wikipedia, topic 'Social Networks'



SOURCEFORGE.NET

PPMNG

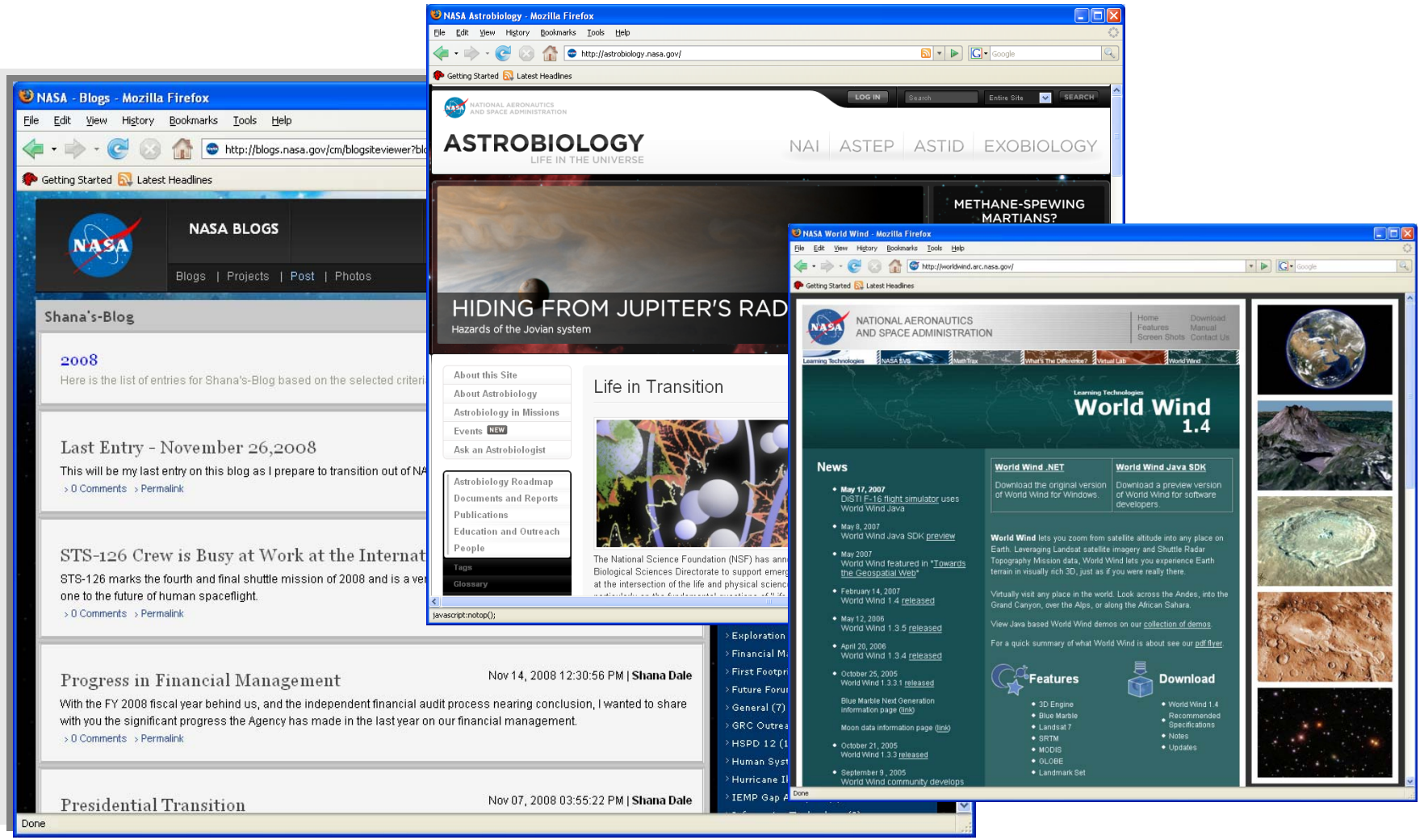
The Social Network for Project Managers

LinkedIn

Web 2.0 Collaboration Tools & NASA

1. External benefits:
   - Broadens the reach of ongoing research with partners, other NASA researchers and the public
   - Provides an opportunity to identify potential research partners
   - Gives the public greater access to research and the ability to participate
   - Brings in students and young people
   - Today's Example: DASH*link* website
2. Improves the efficiency of internal design and development of the website
   - Note: Web 2.0 doesn't have to be public-facing, there is benefit to these processes in our internal projects
   - Today's Example: Trac

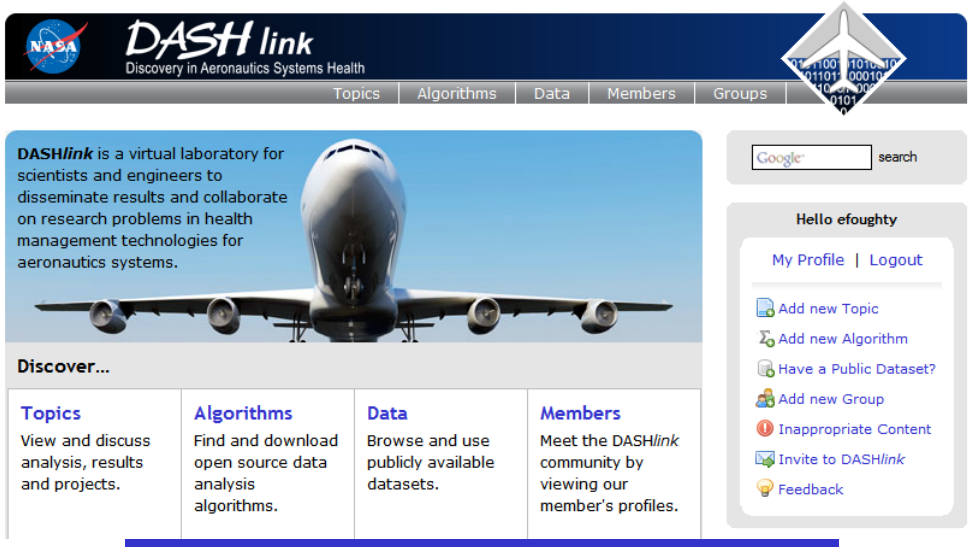
Some NASA forays into Web 2.0 collaboration technologies



DASH*link* website:
Disseminate. Collaborate. Innovate.

What is DASH*link*?

DASH*link* is a virtual laboratory for scientists and engineers to disseminate results and collaborate on research problems in health management technologies for aeronautics systems.



https://dashlink.arc.nasa.gov

DASH*link* Components

Content Component

- Code (Scientific Algorithms)
- Datasets (to be used to develop new algorithms)
- Research topics—papers, posters, etc…

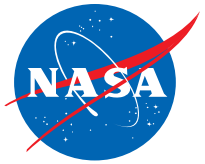
Web 2.0 Features

- Member Contact
- Groups
- Discussions
- Associating Content
- Tagging

Without the first, there's nothing to discuss.

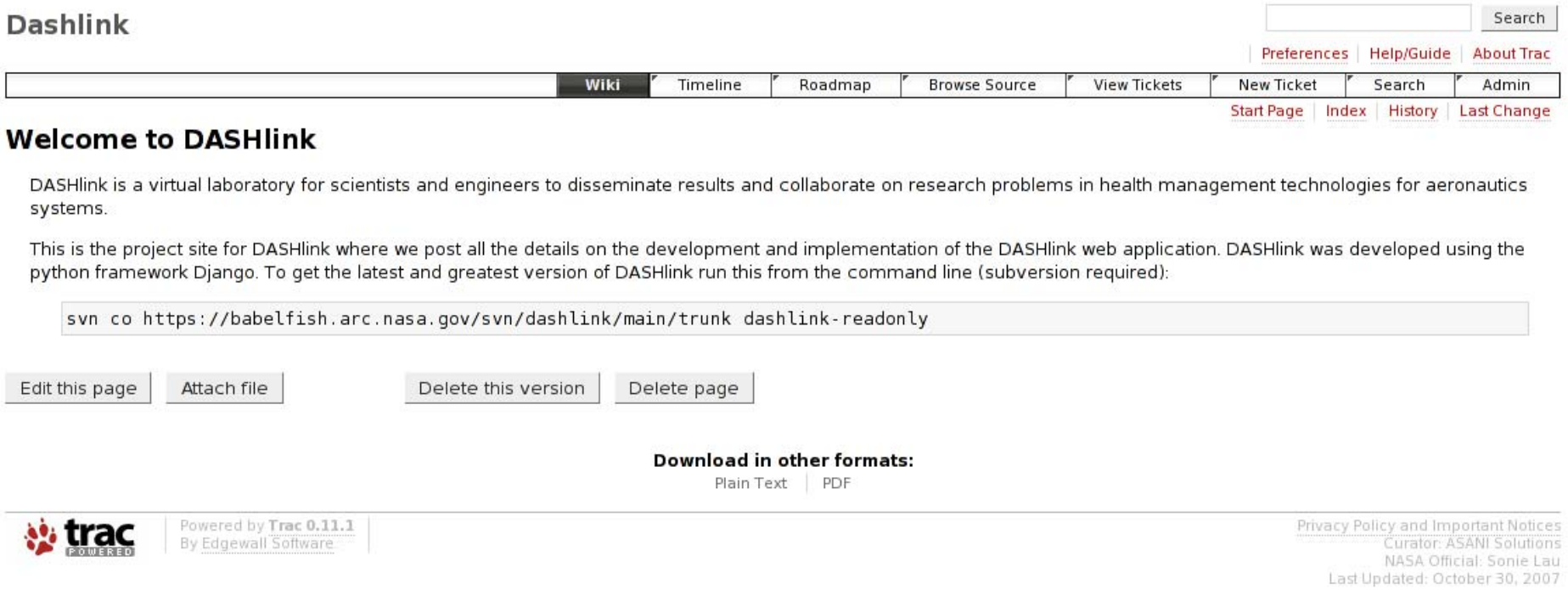
Without the second, there's no added value.

Internal Collaborations -- Trac

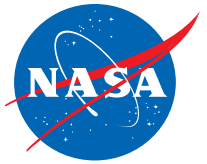


- Our Trac system allows our development team, designers, programmers, and manager to be 'on the same page' about work
- All software code is kept in a versioning system that the developers use to keep track of changes
- All discussion of the site is done through a ticketing system (more rigorous than a wiki, and easier to search through)
- Each ticket is attached to a milestone, and we keep a timeline of milestones
- The Trac site allows us to include and update (version) website documentation as well, from mockups to terms and conditions
- This site (and code) is completely open to all of NASA.

Trac


Dashlink
Search
Preferences
Help/Guide
About Trac
Wiki
Timeline
Roadmap
Browse Source
View Tickets
New Ticket
Search
Admin
Start Page
Index
History
Last Change
Welcome to DASHlink
DASHlink is a virtual laboratory for scientists and engineers to disseminate results and collaborate on research problems in health management technologies for aeronautics systems.
This is the project site for DASHlink where we post all the details on the development and implementation of the DASHlink web application. DASHlink was developed using the python framework Django. To get the latest and greatest version of DASHlink run this from the command line (subversion required):
svn co https://babelfish.arc.nasa.gov/svn/dashlink/main/trunk dashlink-readonly
Edit this page
Attach file
Delete this version
Delete page
Download in other formats:
Plain Text
PDF
trac
POWERED
Powered by Trac 0.11.1
By Edgewall Software
Privacy Policy and Important Notices
Curator: ASANI Solutions
NASA Official: Sonie Lau
Last Updated: October 30, 2007

Fantastic: Now what? (How do I start?)

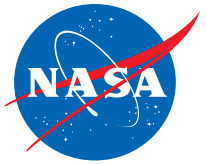


- Plan to work closely with:
  - Your developers (please)
  - Your policy makers and legal team
  - Your expected users - especially your internal NASA users
- Begin with an end in mind
- Off the shelf is NOT always the best solution
  - Less flexibility in design
  - Not ‘every system’ compatible (sharepoint)
  - Ties you to an outside company

Challenges of employing Social Media and Web 2.0 tools at NASA

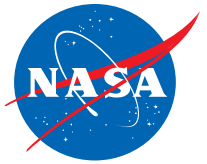
- A workforce unfamiliar with or just beginning to use many social media tools (wikis, blogs etc).
- Cultural resistance to new ways of collaborating.
- Policy and legal barriers, especially as they relate to freely uploading content to the web. Government must comply with many rules that private industry does not contend with.

Example:
Challenges of Community Moderation on a NASA website



To foster open and up-to-the-minute research collaborations, it was deemed truly necessary to have a community-moderated website rather than the standard NASA website official moderating site content.

Example (cont): Challenges of Community Moderation on a NASA website

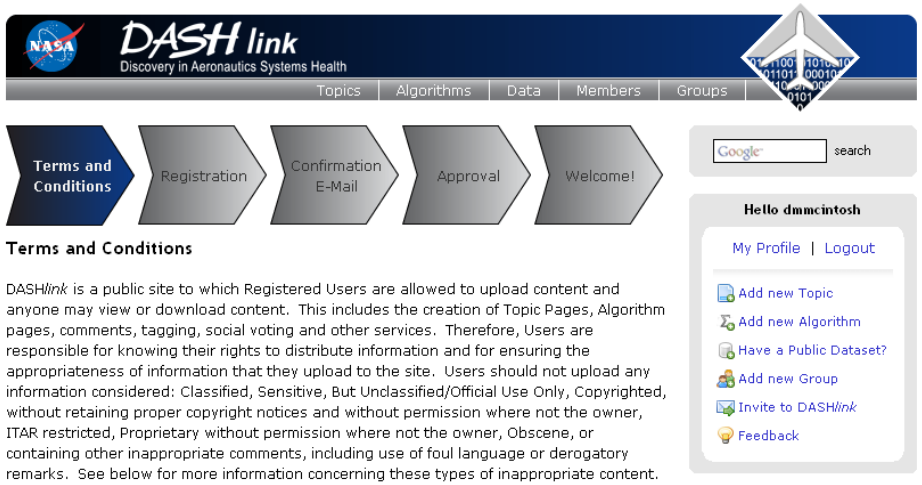


- Policy!!
- Tentative Users
  - Some users were uncertain what could and could not be posted on a public website
  - Some users had concerns about possible abuse of a nasa.gov website
  - Others were unaccustomed to presenting preliminary and ongoing research

Example (cont):
Challenges of Community Moderation on a NASA website

Solution – Registered Users and an atypical registration process

- Only registered users can post content on DASH*link*
  - NOTE: Everyone, including the general public, can view and download content
- With the Ames legal team, a new Terms & Conditions was developed. Every time a registered user posts info, they have to agree to the Terms & Conditions
- DASH*link*'s atypical registration process:
  - NASA Civil Servants can register themselves
  - All others must identify a NASA Civil Servants from the site who can sponsor them. That sponsor is notified by email and must agree to sponsor the applicant
  - NASA Civil Servants are not taking on the responsibility of moderating those they sponsor. Instead, sponsors are agreeing that they know the applicant and believe that their contribution to DASH*link* would be relevant

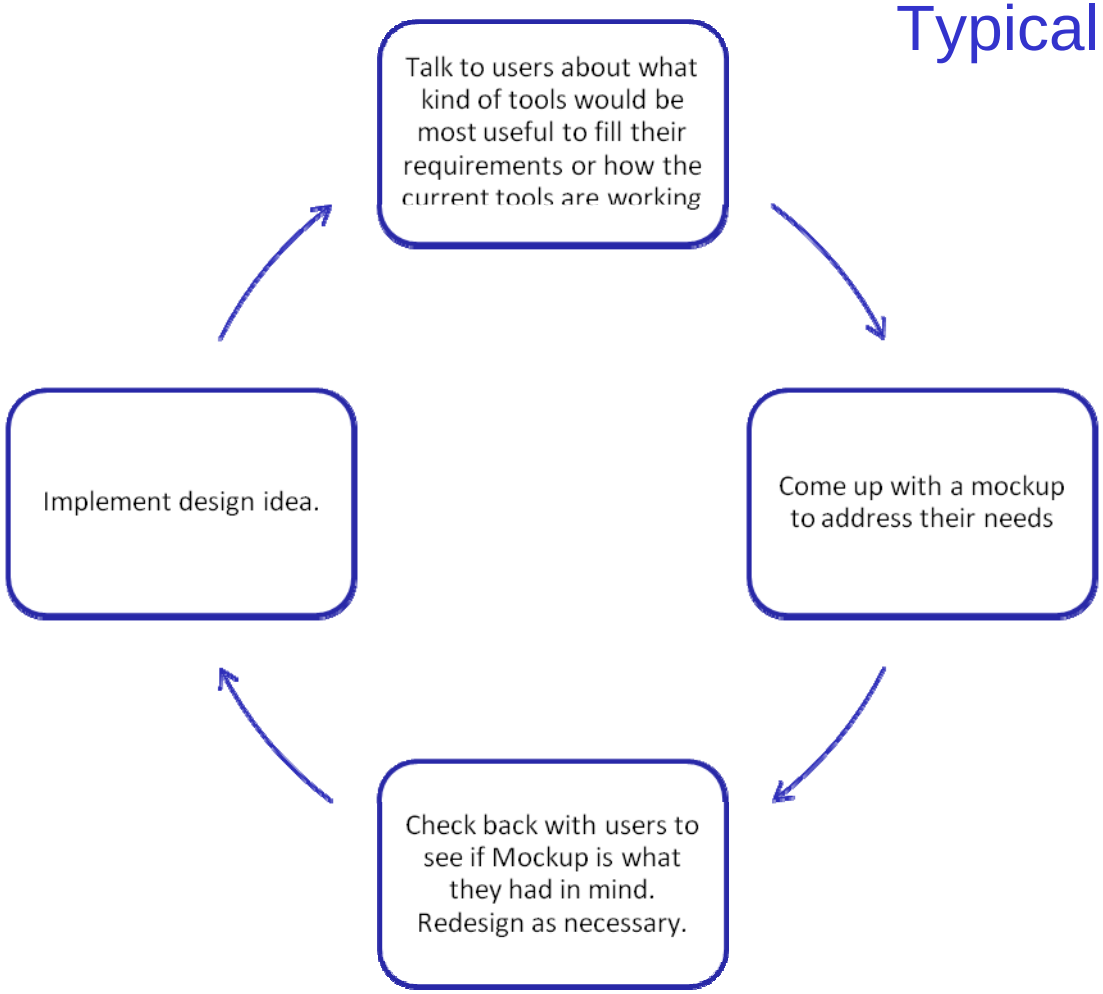


Overcoming the challenges---Lessons Learned

1. An agile design process, reformulated to address the policy and legal questions.
2. Top down encouragement from Project Management, bottom up encouragement from Grad students (e.g., younger users).
3. A focus on content creation and community growth.
4. Make the site incredibly easy to use.
5. …and a bit of persistence, especially working with policy makers and legal.

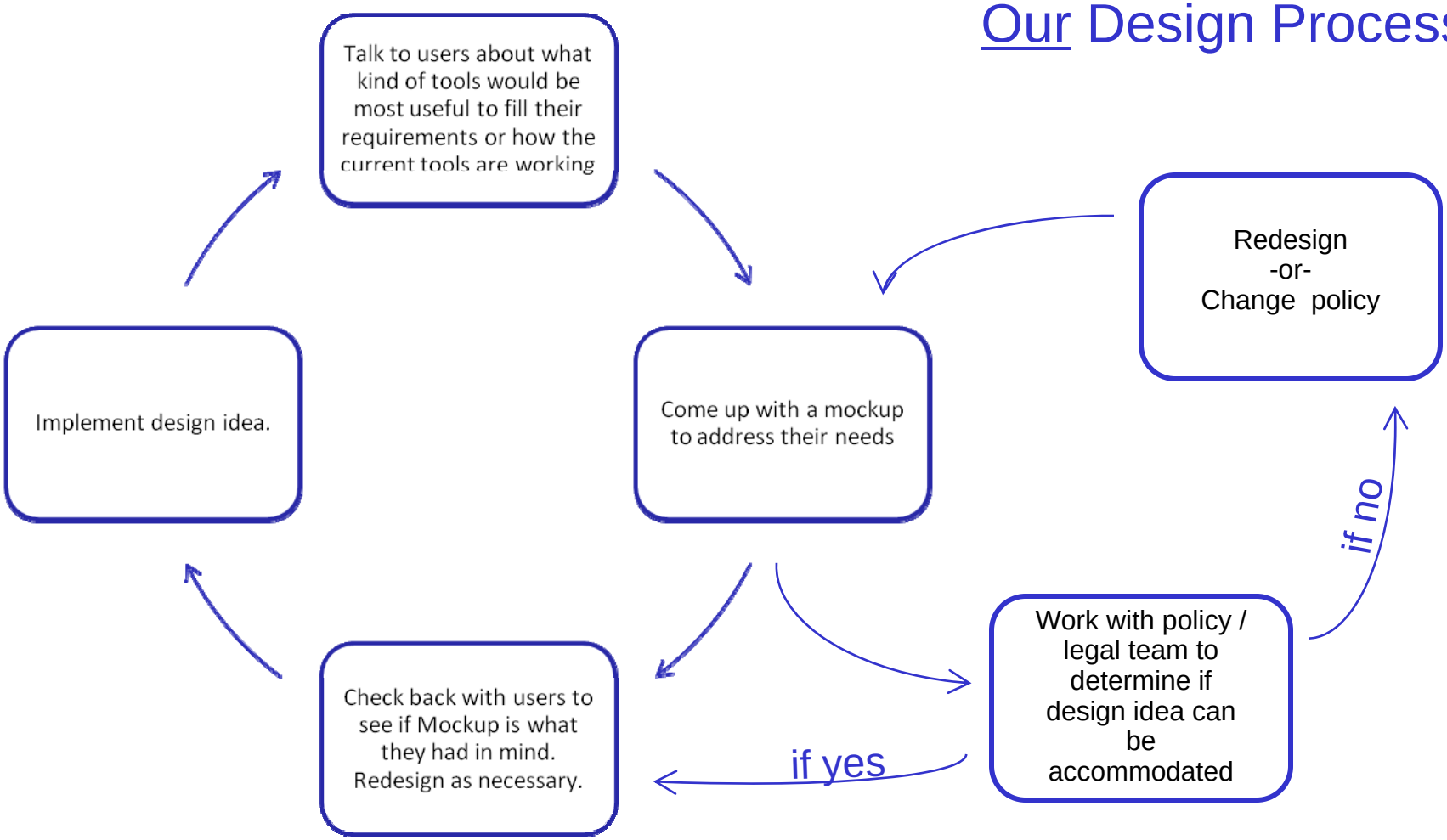
1. Design Process
to identify and implement the Best Tools

Typical Agile Design Process

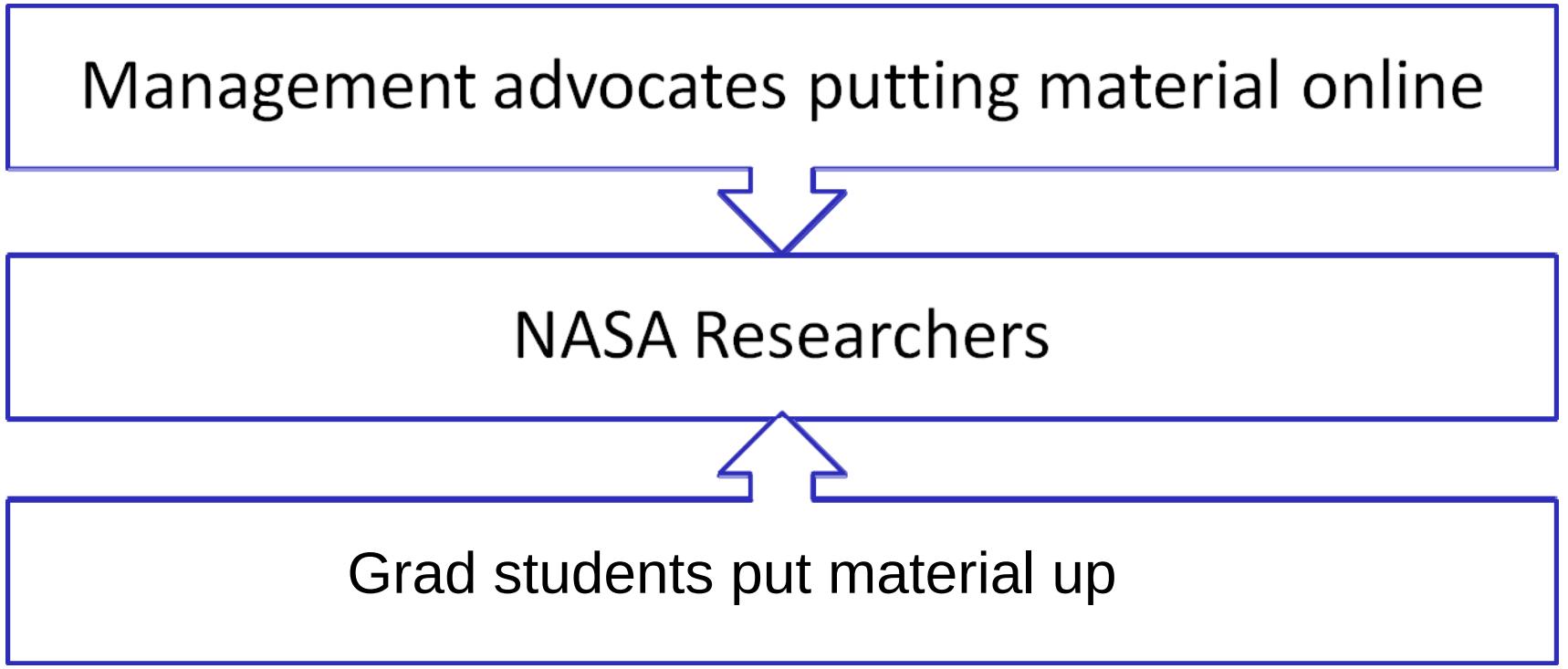


1. Design Process to identify and implement the Best Tools

Our Design Process



2. Encouragement from All Sides



3. Content Creation & Community Growth

If you fill it, they will come.

Our potential users needed a reason to begin using the site, beyond the fact the tool was fun and could "potentially" be incredibly powerful.

By focusing on making it incredibly easy to upload content, then encouraging certain users to do so through various methods

- For instance, by running a 'virtual' poster session on DASH*link* during an annual conference. This introduced users to the site, who then began using it for its intended purpose.

4. Ease of Use Leads to More Content Creation

- Throughout our design process we strove to always make using the site as basic and simple as possible. This often meant forgoing "cooler" tools.
- Even now, we are always responsive when users comment on our process.
  - 'Feedback' link for Registered Users on every page. And a 'Contact Us' link for everyone at the bottom of every page
- As designers, it's important to remember that just because WE understand how to use our wiki/blog/tagging tool doesn't mean they do.

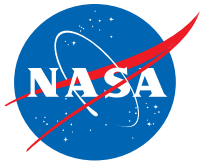
5. Work with Policy Makers & Legal Departments

- Don't implement an idea without getting approval first. It's better to work with policy makers than fight against them
- Do have a solid 'elevator pitch' ready
- Do think from their perspective, and have a counter argument prepared
- Do be willing to compromise but not willing to give in
- Do have a Plan B (and C and D) ready to implement if you can't move policy
- Do consider unconventional solutions

5. Stick it out (be persistent)

- It takes government agencies a long time to change.
- Be willing to compromise, but not drastically.
- Continually look for new ways to draw users in… community development is an ongoing process.

How did we encourage open collaboration at NASA?



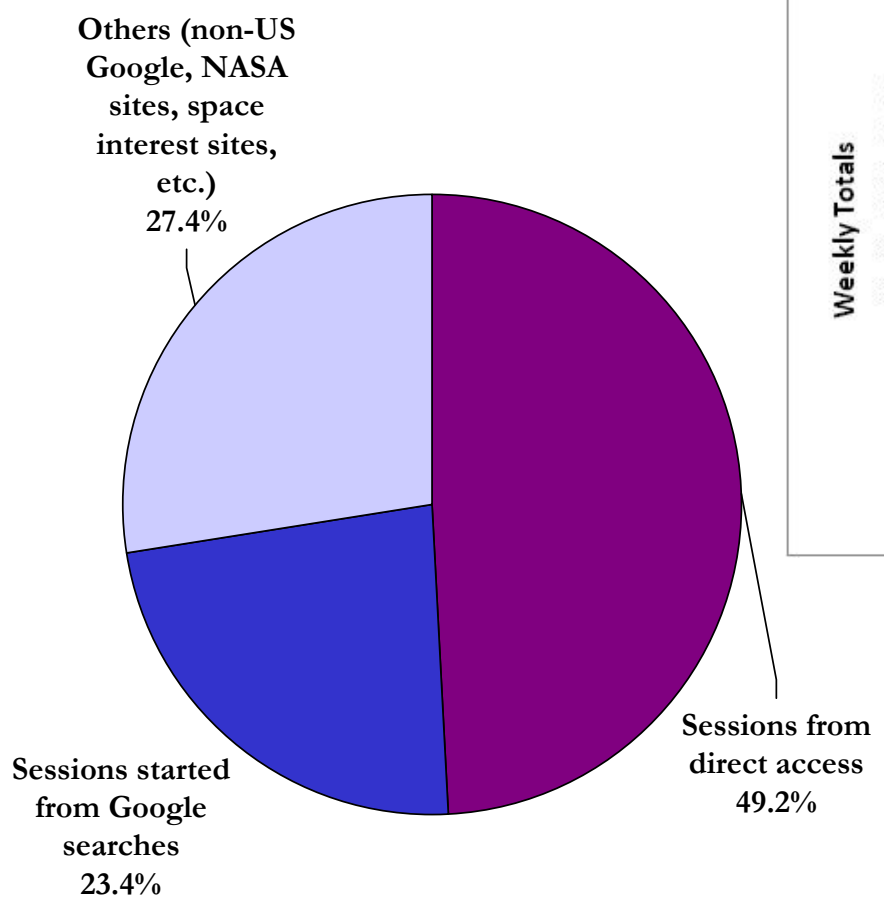
- We researched what other sites did:
  - Most used wikis or forums, along with downloadable source code, to coordinate efforts.
- We built user friendly tools
- We worked with our policy and legal teams to find solutions
- We strongly encouraged content creation by parties we knew to populate the site initially (top down and bottom up).

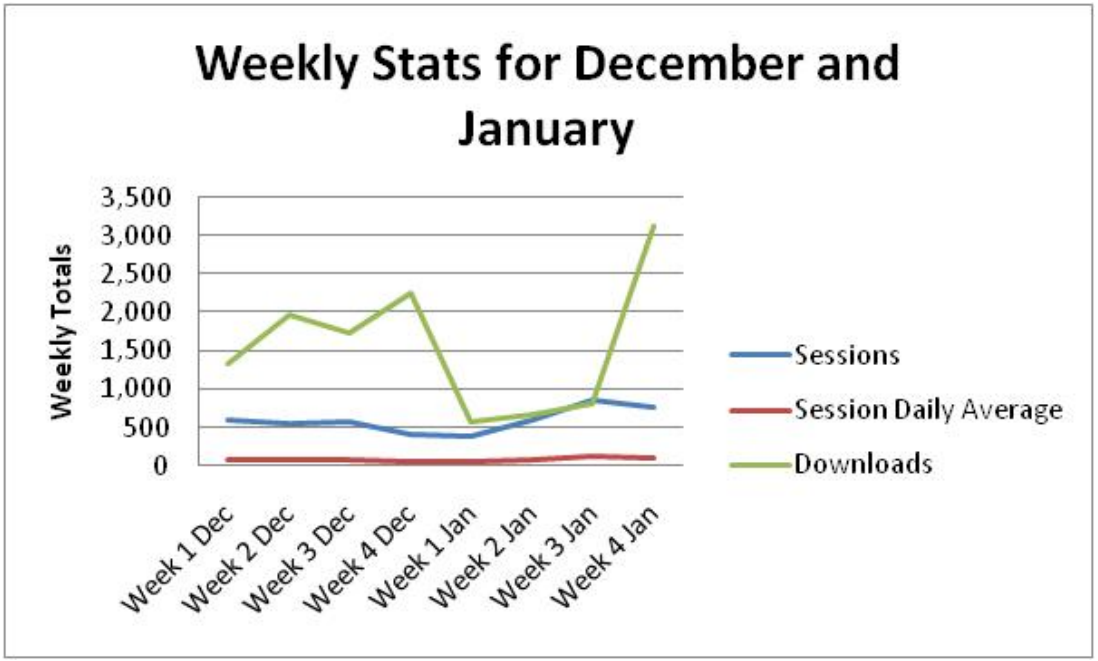
End Result

- Web 2.0 @ NASA: Most people see the benefit of using social media tools – it's less about persuading, and more about lowering barriers (to use, to publishing).

- Project success: DASH*link* succeeded in becoming a public-facing community-moderated website which continues to grow and evolve based on our community's needs.
  - And DASH*link* has experienced continually increasing site membership and traffic since release (June 2008).

DASHlink Stats*





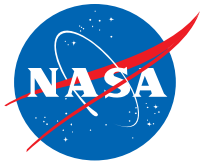
Total Downloads (Dec-Jan): 12,428

Total Membership: 224 and counting

Uses of the 'contact me' feature (Dec-Jan): 78

*Totals refer to the total downloads filtered for visits by 'bots or other crawlers. These are, to the very best of our knowledge, accurate statistics.

Thank You to the DASH*link* Team Members (past and present)



Dr. Francesca Barrientos, formerly of RIACS

Chris Fattarsi, ASANI Solutions, LLC

Elizabeth Foughty, Mission Critical Technologies, Inc.

Dave Kluck, Mission Critical Technologies, Inc.

Bryan Matthews, SGT, Inc.

Dawn McIntosh, NASA HQ

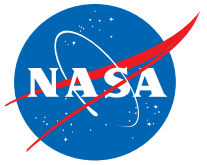
Ray McIntosh, Ames Associate

Dr. Ashok Srivastava, NASA Ames Research Center

Eric Titolo, SGT, Inc.

Sergey Yentus, SGT, Inc.

Questions?



https://dashlink.arc.nasa.gov

http://trac.edgewall.org/